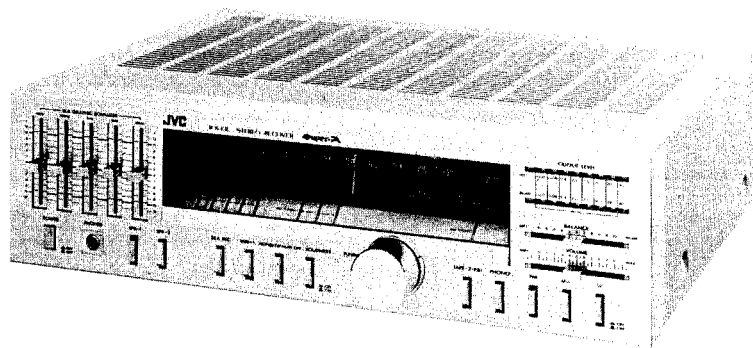


# JVC

## SERVICE MANUAL

MODEL  
**R-S33L**  
STEREO RECEIVER  
**Super-A**



No. 2519  
FEB. 1980

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## Warning:

When replacing the parts marked with  $\triangle$ , be sure to use the designated parts to ensure safety.

## 1. Specifications

### FM Tuner Section (Figures are based upon IHF standard)

Tuning Range	: 87.6 MHz — 108 MHz
Usable Sensitivity (IHF)	: 10.3 dBf (1.8 $\mu$ V/300 $\Omega$ )
50 dB Quieting Sensitivity	
Mono	: 14.8 dBf (3.0 $\mu$ V/300 $\Omega$ )
Stereo	: 38.3 dBf (45 $\mu$ V/300 $\Omega$ )
Distortion	
Mono	: 0.15 % (1 kHz)
Stereo	: 0.3 % (1 kHz)
Signal to Noise Ratio	
Mono	: 82 dB (74 dB, DIN)
Stereo	: 70 dB (65 dB, DIN)
Selectivity	: 65 dB, $\pm$ 400 kHz
	(35 dB, $\pm$ 300 kHz, DIN)
Capture Ratio	: 1.0 dB
IF Rejection	: 90 dB at 98 MHz
Image Rejection	: 60 dB at 98 MHz
Stereo Separation	: 45 dB at 1 kHz

### MW Section

Tuning Range	: 525 kHz — 1605 kHz
Usable Sensitivity	: 300 $\mu$ V/m, 300 $\mu$ V
	(External Antenna)
Signal to Noise Ratio	: 50 dB
Distortion	: 0.5 % at 10 mV/m
Selectivity	: 40 dB, $\pm$ 10 kHz

### LW Section

Tuning Range	: 150 kHz — 350 kHz
Usable Sensitivity	: 500 $\mu$ V/m, 300 $\mu$ V
	(External Antenna)
Signal to Noise Ratio	: 50 dB
Distortion	: 0.5 % at 10 mV/m
Selectivity	: 40 dB, $\pm$ 10 kHz
	36 dB, $\pm$ 9 kHz

### Amplifier Section

RMS Power	: 40 watts per channel at 8 ohms
(Both channels driven, from 20 Hz to 20 kHz)	
RMS Power	: 42 watts per channel at 8 ohms

Total Harmonic Distortion:	0.007 % at rated power,
	20 — 20 kHz, 8 $\Omega$
	0.003 % at rated power,
	1 kHz, 8 $\Omega$

Signal to Noise Ratio	: Phono 77 dB
(IHF short circuited	(75 dB, New IHF)
A network)	Aux/Tape 98 dB
	(75 dB, New IHF)

### S.E.A. Controls

Center Frequencies	: 40 Hz, 250 Hz, 1 kHz, 5 kHz,
	15 kHz
Control Range	: $\pm$ 12 dB

### Input Sensitivity/ Impedance

Input Sensitivity, Impedance	: Phono	2.5 mV/47 kΩ
	Aux	150 mV/50 kΩ
	Tape	150 mV/50 kΩ
	Tape (DIN)	150 mV/50 kΩ
Phono Overload	: 140 mV at 1 kHz (THD 0.05 %)	

### Power Consumption

: See page 18

### Dimensions and Weight

Dimensions			Weight
Height	Width	Depth	Net
11.9 cm	42.2 cm	34.5 cm	7.7 kg

## 2. Removal Procedures

### 2-(1) Top Cover and Bottom Plates

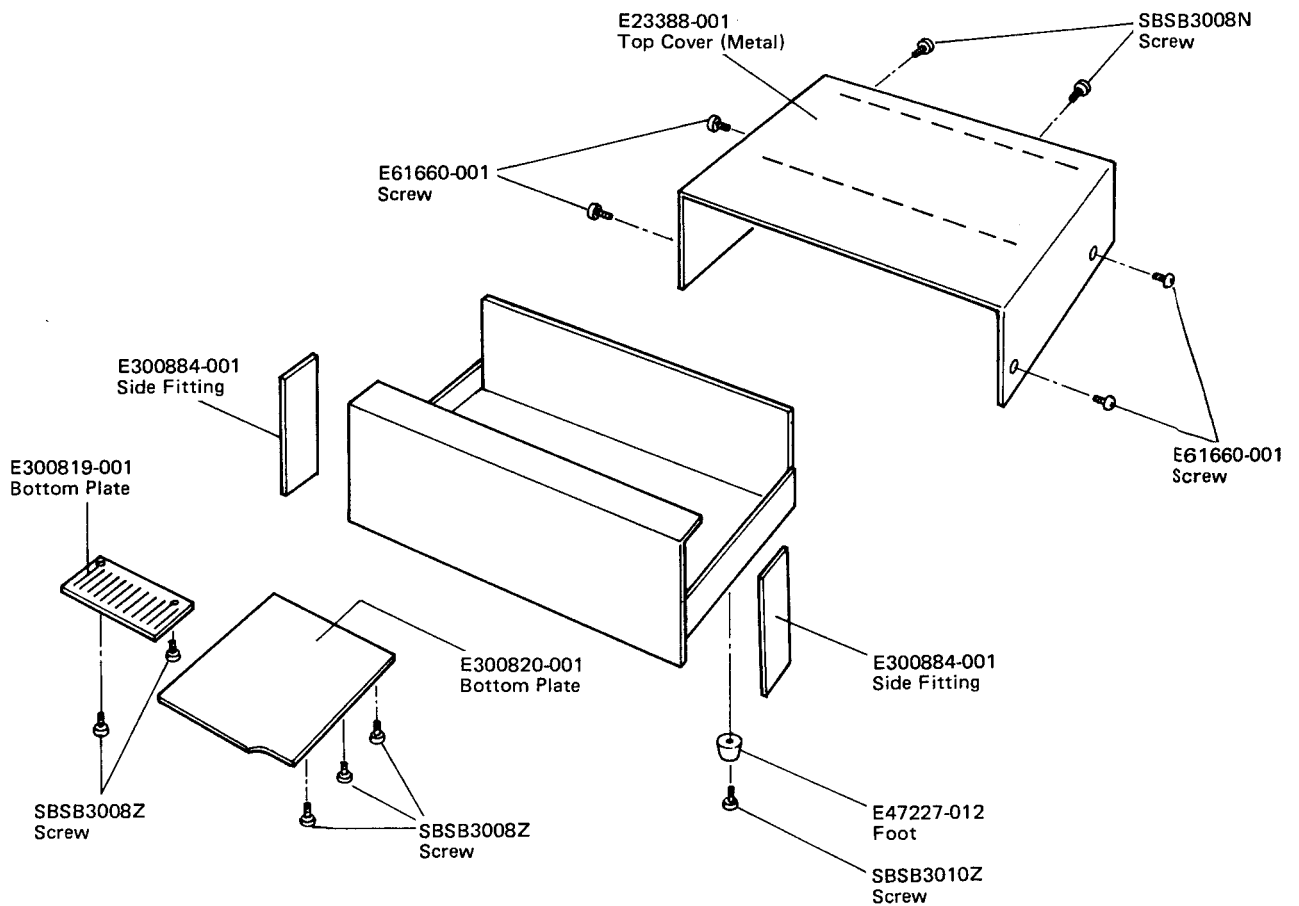


Fig. 1

### 2-(2) Power Transistors

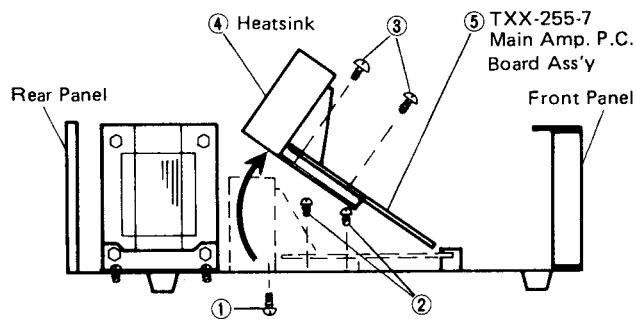


Fig. 2

#### Procedures:

- Step 1: Remove the bottom plate from chassis and 2 screws ① from heatsink ④.
- Step 2: Remove 4 screws ②.
- Step 3: Raise TXX-255-7 ⑤ from chassis as arrowed on Fig. 2 and then resolder the power transistor's leads.
- Step 4: Remove 4 screws ③ and heatsink from TXX-255-7 and then replace the power transistors.

# 3. Main Parts Location

## 3-(1) Top View

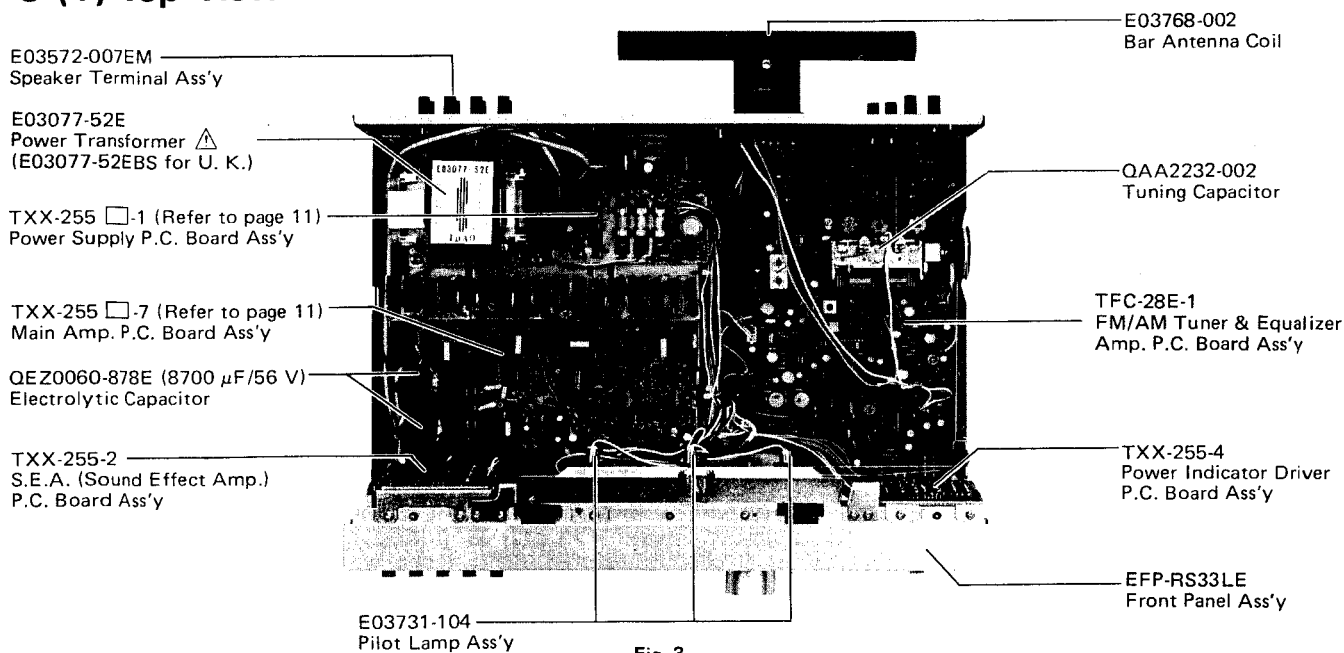


Fig. 3

## 3-(2) Front View

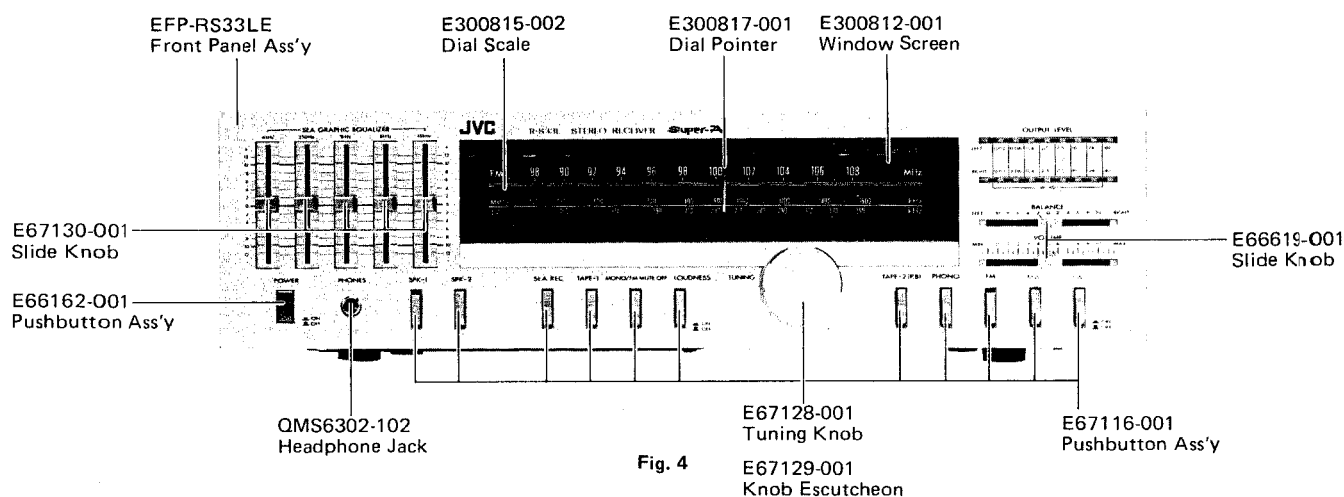


Fig. 4

## 3-(3) Rear View

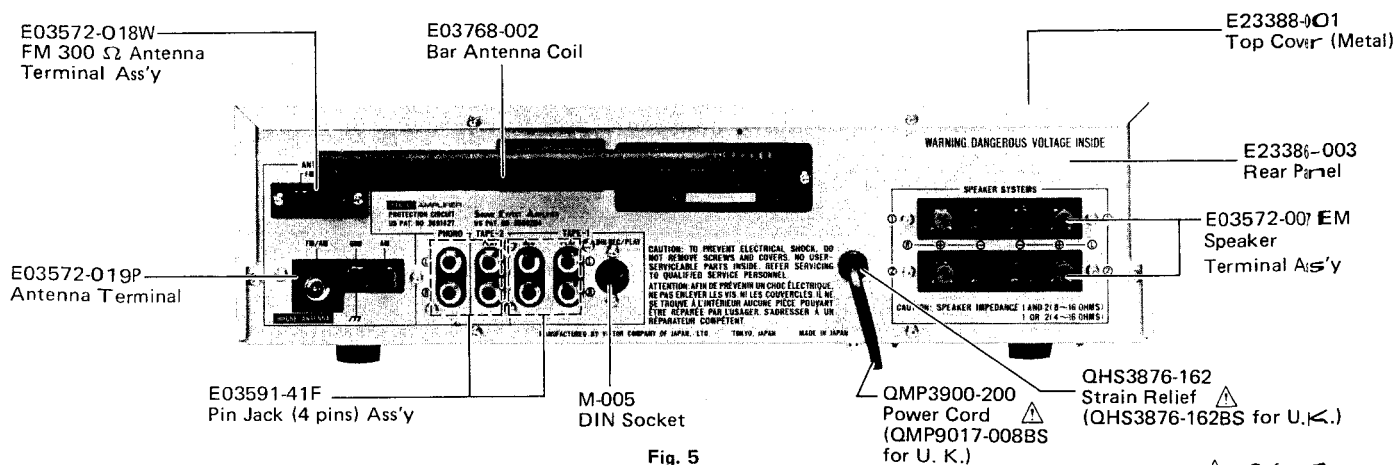
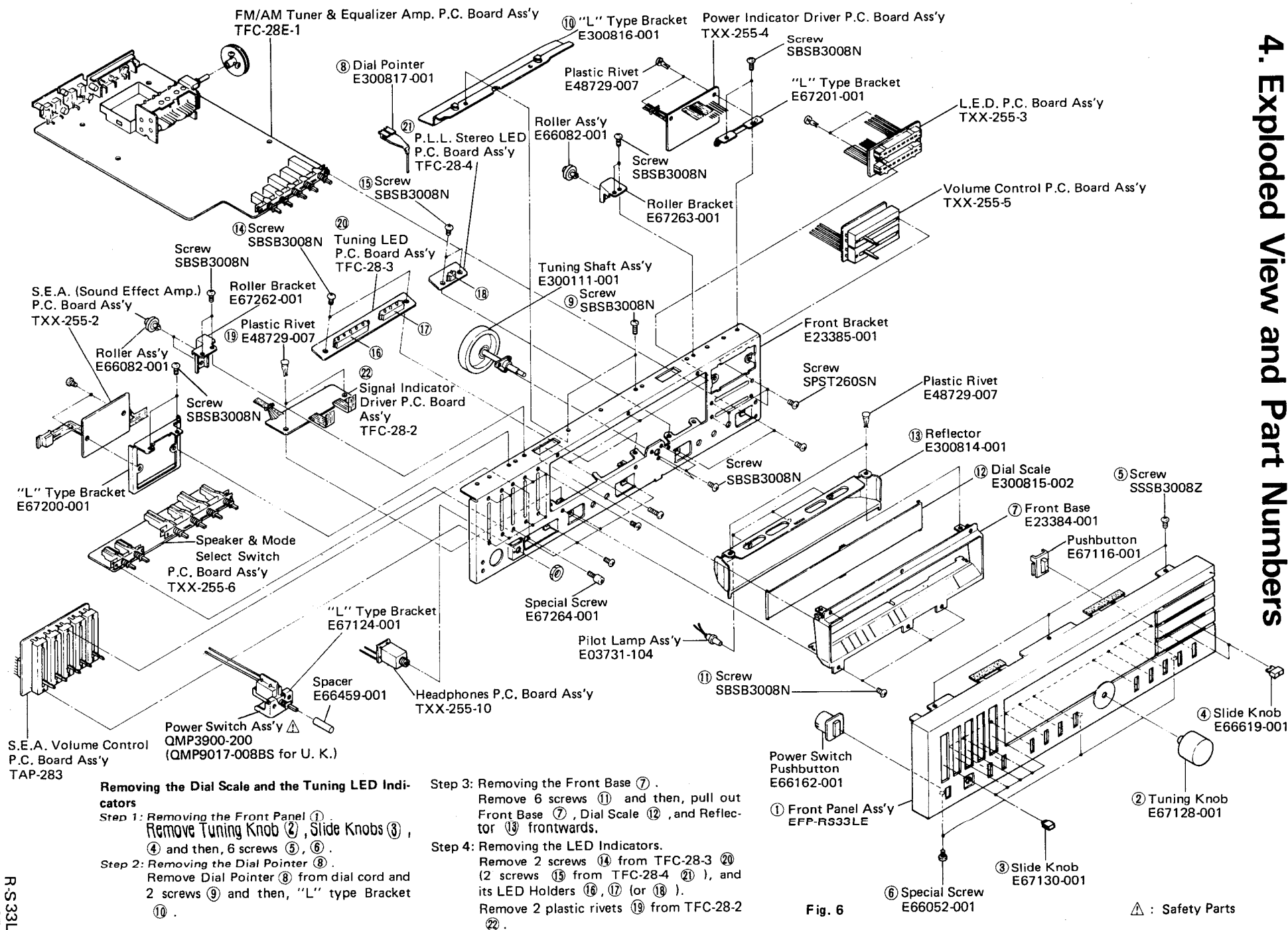


Fig. 5

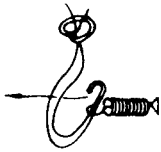
⚠ : Safety Parts



# 4. Exploded View and Part Numbers

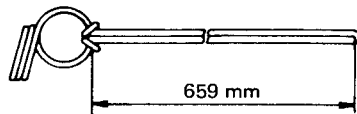


## 5. Dial Stringing Procedures



Put the string through the spring loop.

Fig. 7



Tie the string in a knot having an indicated remaining length.

Fig. 8

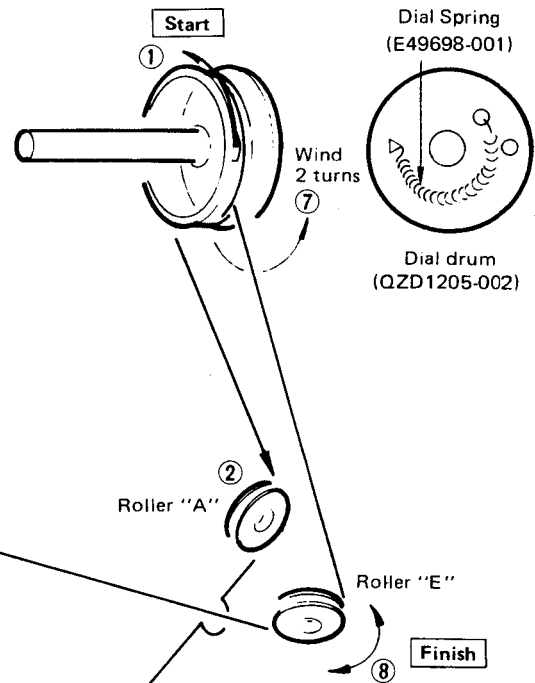


Fig. 9

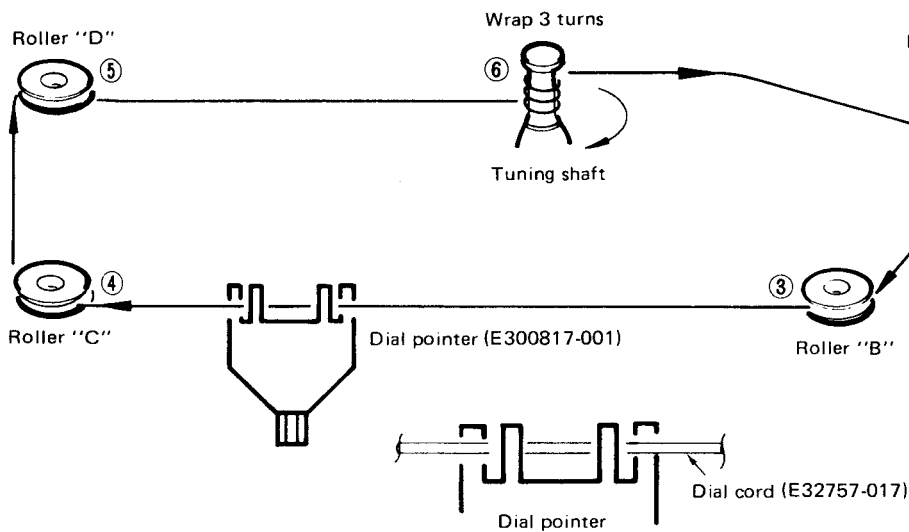


Fig. 10

- (1) Remove dial pointer and old cord.
- (2) Tie end of new dial cord to one end of dial spring, connect other end of dial spring of bottom right eye inside dial drum.
- (3) Rotate the tuning capacitor dial drum to its maximum counterclockwise.
- (4) Run the dial cord through the slot in the rim of the dial drum. See step ①.
- (5) Guide the dial cord around, over and under rollers "A", "B", "C" and "D". Keep the dial cord taut during this procedure. See step ② to ⑤.
- (6) Pull the dial cord taut and wrap 3 turns counterclockwise around tuning shaft. See step ⑥.
- (7) Guide the dial cord over the dial drum and wind 2 turns clockwise. See step ⑦.
- (8) Pull the dial cord taut and set it around roller "E". See step ⑧.
- (9) Turn the tuning shaft to rotate the dial drum fully counterclockwise and fully clockwise to distribute the tensioning along the dial cord.
- (10) Place the dial cord over and under the tabs on the rear of the dial pointer and place the dial pointer on the top of the dial rail. See Fig. 10.
- (11) Turn the tuning shaft clockwise. Slide the dial pointer to zero(0) calibration marker on the logging scale while holding tuning shaft fully clockwise. Cement the dial pointer to the dial cord to prevent slippage. Allow cement to dry thoroughly.

# 6. FM/AM Tuner Alignment Procedures

## 6-(1) FM Section

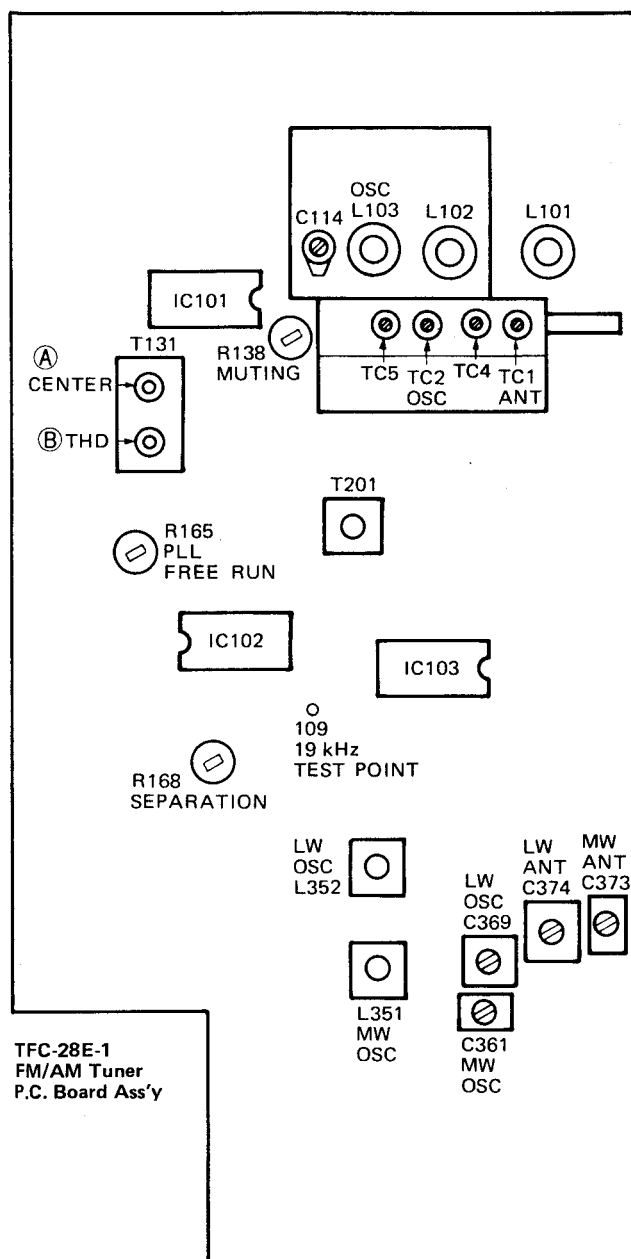


Fig. 11

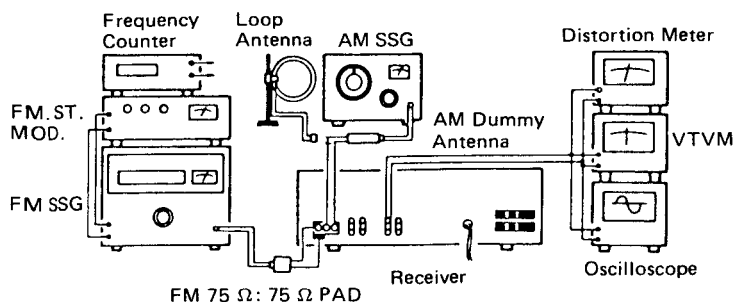


Fig. 12

### Discriminator, Center Meter, Distortion and Signal Gain

1. Press to FM position.
2. Connect an RF generator, 1 kHz modulation and 75 kHz deviation, to the antenna terminals on the rear panel through a dummy antenna.
3. Connect an Oscilloscope, Distortion Meter and VTVM to the Rec. Out jacks on the rear panel.
4. Tune to a frequency where there is no broadcasting.
5. Adjust a core indicated arrow (A) of T131 so that the FM Tuning L.E.D. illuminates the center position.
6. Set the RF generator to 98 MHz.
7. Set the dial pointer to 98 MHz.
8. Adjust a core indicated arrow (B) of T131 so that the distortion is minimized at a value less than 0.4 %.

### Tracking and Sensitivity

**Precaution:** No adjustment is necessary. The tracking and sensitivity have been adjusted properly and completely at the factory. If any special reason occasioned, take the following procedures carefully.

### Low Frequency

1. Connect an RF generator the antenna terminals on the rear panel through a dummy antenna.
2. Set an RF generator to 88 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of 2  $\mu$ V.
3. Connect a VTVM and an Oscilloscope to the Rec. Out jacks on the rear panel.
4. Set the dial pointer to 88 MHz.
5. Adjust the three coils L103, L102 and L101 in the tuning gang to maximize the output.

### High Frequency

6. Set the RF generator to 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to provide an input of 2  $\mu$ V.
7. Set the dial pointer to 108 MHz.
8. Adjust the FM trimmers C114, TC2 and TC1 in the tuning gang to maximize the output.
9. Repeat these high and low frequencies adjustment alternately until maximum sensitivity is obtained.

### Multiplex and Stereo Separation

#### Multiplex

1. Set the Stereo signal generator as follows: 400 Hz modulation frequency, 7.5 kHz deviation pilot, 67.5 kHz main and sub carriers. Connect its output to an RF generator.
2. Connect an RF generator to the antenna terminals through a dummy antenna.
3. Connect a VTVM, an Oscilloscope and a Distortion Meter to the Rec. Out jacks on the rear panel.
4. Set the RF generator to 98 MHz and output of 1 mV.
5. Set the dial pointer to 98 MHz.
6. Connect the Frequency Counter to 19 kHz Test Point. (TP 109).
7. Switch off the pilot signal of Stereo Modulator.
8. Adjust R165 so that the frequency counter indicates 19 kHz (0~50 Hz).

## 6-(2) MW(LW) Section

**Note:** ( ) for LW Alignment Procedures

### Tracking and Sensitivity

#### Low Frequency

1. Connect the RF generator to the antenna terminals on the rear panel, set this to 600 kHz (160 kHz) with 30 % modulation at 400 Hz.
2. Connect an AC VTVM and an oscilloscope to the Rec. out jacks on the rear panel.
3. Set the dial pointer to 600 kHz (160 kHz).
4. Adjust OSC coil L351 (L352) and the ferrite bar antenna core to maximize the output signal. Left ferrite bar is for MW (right ferrite bar is for LW). Refer to photo below.

#### High Frequency

5. Set the RF generator to 1400 kHz (350 kHz) with 30% modulation at 400 Hz.
6. Set the dial pointer to 1400 kHz (350 kHz).
7. Adjust the trimmers C361 (C369) and C373 (C374) in the tuning gang so that the output signal is maximized.
8. Repeat these high and low frequencies adjustment procedures alternately until maximum sensitivity is obtained.



MW/LW Ferrite Bar Antenna Adjustments

### Stereo Separation

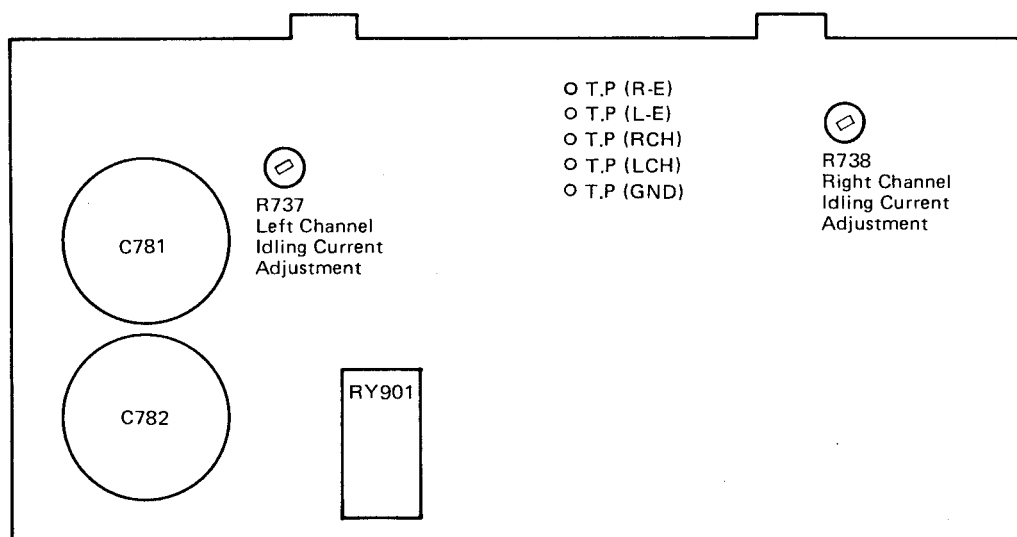
9. Switch the selector of Stereo Modulator to left channel modulation.
10. Adjust R168 so that the output of right channel is minimized.
11. Switch the selector of the modulator to right channel modulation.
12. Adjust R168 so that the left channel is minimized.
13. Set R168 to a average, if the separation of left and right is different.

### Muting Level

**Note:** No adjustment is necessary. However, if the check-up is required, take the following steps.

1. Release the MONO/FM MUTE OFF pushbutton during this adjustment procedures.
2. Connect a VTVM and an Oscilloscope to the Rec. Out jacks on the rear panel.
3. Set the RF generator to 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to provide an input of 8  $\mu$ V.
4. Turn R138 clockwise and remember the point (or position) at which the muting ceases operating.
5. Turn R138 counterclockwise slightly so that the output level drops by 1 dB.
6. Attenuate the output of the RF generator to 2 dB from 8  $\mu$ V of step 2 and check that the muting is still operating.

## 7. Power Amplifier Idling Current Adjustment Procedure



Adjustment Location of TXX-255-7 Main Amp. P.C. Board Ass'y

Fig. 13

### Precaution:

- (1) Allow the set to warm up at least 5 minutes before connecting a DC VTVM.
  - (2) Must keep the heatsinks cooling to prevent overheating and consequent destruction of the semiconductor junction and set the volume control to minimum during these adjustment procedures.
- ( ): for Right channel Adjustment

### Procedures:

1. Turn R737 and (R738) fully counterclockwise before the power switch on.
2. Connect a DC VTVM to the Test Point L-CH and L-E (R-CH and R-E).
3. Adjust R737 (R738) for DC VTVM reading of 5 mV.

# 8. Printed Circuit Board Ass'y and Parts list

## 8-(1) TFC-28E FM/AM Tuner and Equalizer Amp. P.C. Board Ass'y

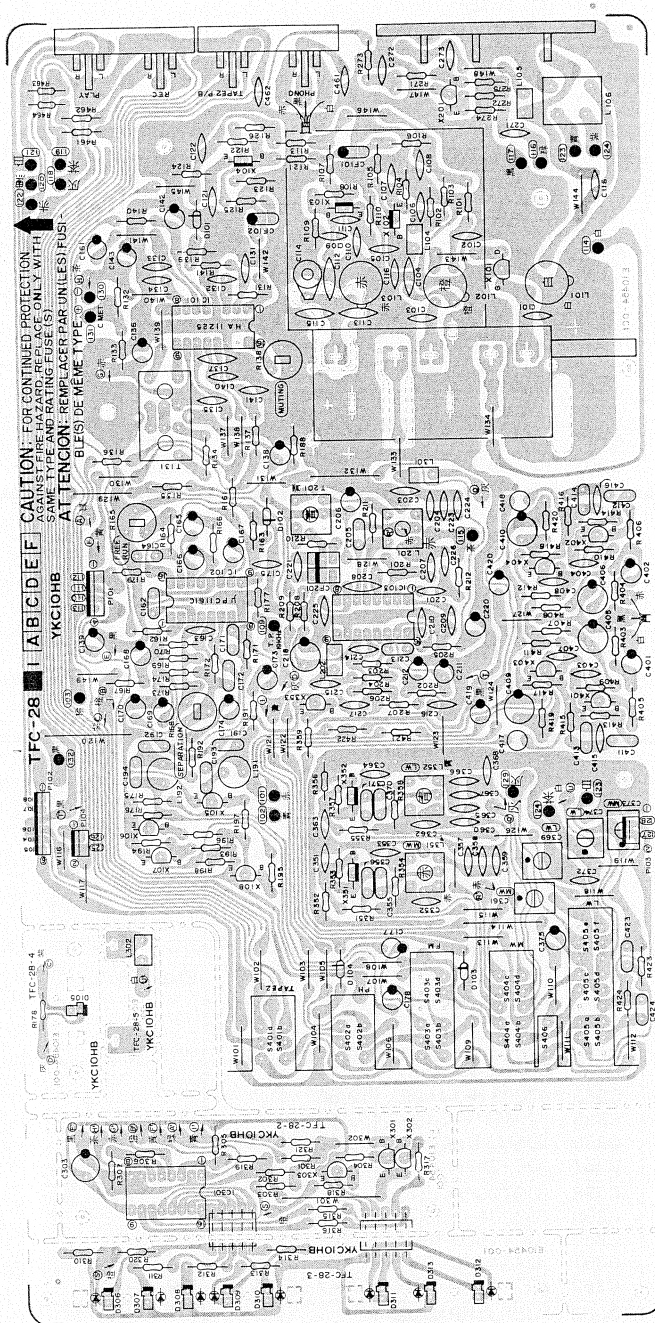


Fig. 14

### Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT	FET	Maker
X101	2SK168(E,F)	0.2 W		FET	Hitachi
X102	2SC535(B,C)	0.1 W	940 MHz	Silicon	"
X103	2SC1342(B,C)	"	410 MHz	"	"
X104	2SC535(B,C)	"	940 MHz	"	"
X105	2SC458(C)	0.2 W	230 MHz	"	"
X106	2SC458(C)	"	"	"	"
X107	2SC458(C)	"	"	"	"
X108	2SA1029(C)	"	200 MHz	"	"
X201	2SC461(C)	"	230 MHz	"	"
X301	2SC458(C)	"	"	"	"

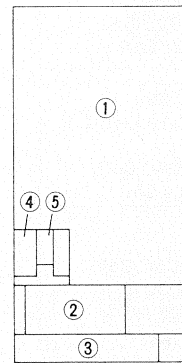


Fig. 15

### Each Individual P.C. Board Location

- ① TFC-28E-1 : FM/AM Tuner & Equalizer Amp. P.C. Board Ass'y
- ② TFC-28-2 : Signal Indicator Driver P.C. Board Ass'y
- ③ TFC-28-3 : Signal L.E.D. P.C. Board Ass'y
- ④ TFC-28-4 : PLL STEREO L.E.D. P.C. Board Ass'y
- ⑤ TFC-28-5 : Antenna Coil P.C. Board Ass'y

### Note:

The specific symbols (赤, 黒, 白, ... etc.) on a surface of P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly at the factory.

### Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT	Silicon	Maker
X302	2SC458(C)	0.2 W	200 MHz	"	Hitachi
X303	2SA1029(C)	"	200 MHz	"	"
X351	2SC461(B)	"	230 MHz	"	"
X352	2SC461(B)	"	"	"	"
X353	2SC458(C)	"	"	"	"
X401	2SA872AV(E)	0.3 W	120 MHz	"	"
X402	2SA872AV(E)	"	"	"	"
X403	2SC1775AV(F)	0.2 W	200 MHz	"	"
X404	2SC1775AV(F)	"	"	"	"

### Integrated Circuits

Item No.	Part Number	Rating		Description	
		Pc		IC	Maker
IC101	HA11225	0.59 W		"	Hitachi
IC102	UPC1161C	"		"	NEC
IC103	HA1197	0.45 W		"	Hitachi
IC301	IR2434	1.0 W		"	Sharp

### Diodes

Item No.	Part Number	Rating	Description	
			Silicon	Maker
D101	1S2076-31		"	Hitachi
D102	1S2076-31		"	"
D103	1S2076-31		"	"
D104	1S2076-31		"	"
D308	SLB-26UR		LED	Toyo Dengu
D309	SLB-26UR		"	"
D310	SLB-26UR		"	"
D312	SLB-26UR		"	"
D306	SLB-26UR		"	"
D307	SLB-26UR		"	"
D311	SLB-26UR		"	"
D313	SLB-26GG		"	"

### Coils & Transformers

Item No.	Part Number	Rating	Description
L101	E03477-031		FM ANT Coil
L102	E03477-035		FM RF Coil
L103	E03477-034		FM OSC Coil
L104	E03522-1R5KY		Choke Coil
L105	E03522-2R2KY		"
L106	E03177-005		BALUN
L191	Y00118-103		MPX 19 kHz Coil
L192	Y00118-103		"
L201	E03079-36		AM OSC Coil
L202	E03522-391KY		Choke Coil
L301	E03522-2R2KY		"
L302	E3522-2R2KY		"
L351	E03079-39		MW OSC Coil
L352	E03079-38		LW OSC Coil
T131	E03793-001		FM DET Coil
T201	E03613-017		AM IFT

### Filters

Item No.	Part Number	Rating	Description
CF101	E03357-009		Ceramic Filter
CF102	E03357-009		"
CF201	E03613-019		"

### Capacitors

Item No.	Part Number	Rating		Description
C101	QCS31HJ-120Z	12 pF	50 V	Ceramic
C102	QCF31HP-103Z	0.01 $\mu$ F	"	"
C103	QCS31HJ-150Z	15 pF	"	"
C104	QCS21HJ-3R0	3 pF	"	"
C105	QCS21HJ-2R0	2 pF	"	"
C106	QCS31HJ-151Z	160 pF	"	"
C107	QCF31HP-103Z	0.01 $\mu$ F	"	"
C108	QCF31HP-103Z	"	"	"
C109	QCF21HP-103	"	"	"
C110	QCT25CH-100Z	10 pF	"	"
C111	QCT25CH-220Z	22 pF	"	"
C112	QCT05CH-7R0	7 pF	"	"
C113	QCT05PH-120	12 pF	"	"
C114	QAT3001-014			Trimmer
C115	QCT05RH-120	12 pF	50 V	Ceramic
C116	QCS31HJ-221Z	220 pF	"	"
C121	QCF31HP-223Z	0.022 $\mu$ F	"	"
C122	QCF31HP-223Z	"	"	"
C131	QCF31HP-223Z	"	"	"
C132	QCF31HP-223Z	"	"	"
C133	QCS31HJ-330Z	33 pF	"	"
C134	QCF31HP-223Z	0.022 $\mu$ F	"	"
C135	QCF31HP-223Z	"	"	"
C136	QET61AR-107Z	100 $\mu$ F	10 V	Electrolytic
C137	QCF21HP-223	0.022 $\mu$ F	50 V	Ceramic
C138	QET61CR-476Z	47 $\mu$ F	16 V	Electrolytic
C139	QET61HR-474Z	0.47 $\mu$ F	50 V	"
C140	QCF31HP-223Z	0.022 $\mu$ F	"	Ceramic
C141	QCF21HP-223	"	"	"
C142	QET61ER-106Z	10 $\mu$ F	25 V	Electrolytic
C143	QET61HR-474Z	0.47 $\mu$ F	50 V	"
C161	QET61ER-106Z	10 $\mu$ F	25 V	"
C162	QFM31HK-473	0.047 $\mu$ F	50 V	Mylar
C163	QCS31HJ-101Z	100 pF	"	Ceramic
C164	QFP31HJ-471	470 pF	"	Polypropylene
C165	QEB51EM-335	3.3 $\mu$ F	25 V	Low Leak Current Electrolytic
C166	QEB51HM-105	1 $\mu$ F	50 V	"
C167	QEB51HM-224	0.22 $\mu$ F	"	"
C168	QET61CR-107Z	100 $\mu$ F	16 V	Electrolytic




### Capacitors

Item No.	Part Number	Rating		Description
C169	QET61ER-106Z	10 $\mu$ F	25 V	Electrolytic
C170	QET61ER-106Z	"	"	"
C171	QFM31HK-102Z	1000 pF	50 V	Mylar
C171	QFM31HK-152Z	1500 pF	"	"
C172	QFM31HK-102Z	1000 pF	"	"
C172	QFM31HK-152Z	1500 pF	"	"
C173	QET61HR-225Z	2.2 $\mu$ F	"	Electrolytic
C174	QET51HR-225	"	"	"
C175	QCF31HP-223Z	0.022 $\mu$ F	"	Ceramic
C177	QET61HR-474Z	0.47 $\mu$ F	"	Electrolytic
C178	QET61HR-474Z	"	"	"
C191	QFM31HK-682Z	6800 pF	"	Mylar
C192	QFM31HK-682Z	"	"	"
C193	QFM31HK-182Z	1800 pF	"	"
C194	QFM31HK-182Z	"	"	"
C201	QCF31HP-223Z	0.022 $\mu$ F	"	Ceramic
C203	QCT25UJ-150Z	15 pF	"	"
C204	QCS31HJ-330Z	33 pF	"	"
C205	QFM31HK-103Z	0.01 $\mu$ F	"	Mylar
C206	QET61ER-106Z	10 $\mu$ F	25 V	Electrolytic
C207	QCF31HP-223Z	0.022 $\mu$ F	50 V	Ceramic
C208	QCF21HP-223	"	"	"
C209	QCF31HP-223Z	"	"	"
C210	QCF31HP-223Z	"	"	"
C211	QET61HR-105Z	1 $\mu$ F	"	Electrolytic
C212	QET61ER-106Z	10 $\mu$ F	25 V	"
C213	QFM31HK-102Z	1000 pF	50 V	Mylar
C214	QCF31HP-223Z	0.022 $\mu$ F	"	"
C215	QCS31HJ-331Z	330 pF	"	"
C216	QCF31HP-103Z	0.1 $\mu$ F	"	"
C217	QCF31HP-223Z	0.022 $\mu$ F	"	"
C218	QET61CR-476Z	47 $\mu$ F	16 V	Electrolytic
C220	QET61ER-106Z	10 $\mu$ F	25 V	"
C221	QCS31HJ-560Z	56 pF	50 V	Ceramic
C223	QCT26CH-151	150 pF	"	"
C224	QCT26CH-151	"	"	"
C225	QCS31HJ-470Z	47 pF	"	"
C226	QCS31HJ-330Z	33 pF	"	"
C271	QCF31HP-473Z	0.047 $\mu$ F	"	"
C272	QCF31HP-473Z	"	"	"
C273	QCF31HP-223Z	0.022 $\mu$ F	"	"
C303	QET61CR-107Z	100 $\mu$ F	16 V	Electrolytic
C303	QET61HR-105Z	1 $\mu$ F	50 V	"
C304	QET61CR-107Z	100 $\mu$ F	16 V	"
C351	QCF31HP-473Z	0.047 $\mu$ F	50 V	Ceramic
C352	QCF31HP-473Z	"	"	"
C353	QCS31HJ-100Z	10 pF	"	"
C355	QFM31HK-103Z	0.01 $\mu$ F	"	Mylar
C356	QFM31HK-153Z	0.015 $\mu$ F	"	"
C357	QCT25PH-151Z	150 pF	"	Ceramic
C358	QCT25PH-151Z	"	"	"
C359	QCS31HJ-330Z	33 pF	"	"
C360	QCT25UJ-100Z	10 pF	"	"
C361	QAT20001-001			Trimmer
C362	QCF31HP-473Z	0.047 $\mu$ F	50 V	Ceramic
C363	QCF31HP-473Z	"	"	"
C364	QCS31HJ-560Z	56 pF	"	"
C365	QCT25UJ-270Z	27 pF	"	"
C366	QCT25CH-680Z	68 pF	"	"
C367	QCT25CH-680Z	"	"	"
C368	QCT25CH-220Z	22 pF	"	"
C369	QAT2001-005			Trimmer
C370	QFM31HK-223Z	0.022 $\mu$ F	50 V	Mylar
C371	QFM31HK-333Z	0.033 $\mu$ F	"	"
C372	QCS31HJ-180Z	18 pF	"	Ceramic
C373	QAT2001-005			Trimmer
C374	QAT2001-001			"
C375	QET61HR-474Z	0.47 $\mu$ F	50 V	Electrolytic
C401	QET61HR-475Z	4.7 $\mu$ F	"	"
C402	QET61HR-475Z	"	"	"

### Capacitors

Item No.	Part Number	Rating		Description
C403	QCS31HJ-471Z	470 pF	50 V	Ceramic
C404	QCS31HJ-471Z	"	"	"
C405	QET60JR-227Z	220 $\mu$ F	6.3 V	Electrolytic
C406	QET60JR-227Z	"	"	"
C407	QCS31HJ-470Z	47 pF	50 V	Ceramic
C408	QCS31HJ-470Z	"	"	"
C409	QET60JR-227Z	220 $\mu$ F	6.3 V	Electrolytic
C410	QET60JR-227Z	"	"	"
C411	QFM31HK-153Z	0.015 $\mu$ F	50 V	Mylar
C412	QFM31HK-153Z	"	"	"
C413	QFM31HK-472Z	4700 pF	"	"
C414	QFM31HK-472Z	"	"	"
C415	QCS31HJ-471Z	470 pF	"	Ceramic
C416	QCS31HJ-471Z	"	"	"
C417	QEZO046-105	1 $\mu$ F	"	Electrolytic
C418	QEZO046-105	"	"	"
C419	QET61ER-476Z	47 $\mu$ F	25 V	"
C420	QET61ER-476Z	"	"	"
C423	QFM31HK-153Z	0.015 $\mu$ F	50 V	Mylar
C424	QFM31HK-153Z	"	"	"
C461	QCF31HP-223Z	0.022 $\mu$ F	"	Ceramic
C462	QCF31HP-473Z	0.047 $\mu$ F	"	"

### Resistors

Item No.	Part Number	Rating		Description
R101	QRD141J-391SY	390 $\Omega$	1/4 W	Carbon
R102	QRD141J-472SY	4.7 k $\Omega$	"	"
R103	QRD141J-223SY	22 k $\Omega$	"	"
R104	QRD141J-102SY	1 k $\Omega$	"	"
R105	QRD141J-101SY	100 $\Omega$	"	"
R106	QRD141J-561SY	560 $\Omega$	"	"
R107	QRD141J-222SY	2.2 k $\Omega$	"	"
R108	QRD141J-103SY	10 k $\Omega$	"	"
R109	QRD141J-682SY	6.8 k $\Omega$	"	"
R110	QRD141J-272SY	2.7 k $\Omega$	"	"
R113	QRD149J-220S	22 $\Omega$	"	" 
R121	QRD141J-221SY	220 $\Omega$	"	"
R122	QRD141J-273SY	27 k $\Omega$	"	"
R123	QRD141J-103SY	10 k $\Omega$	"	"
R124	QRD141J-471SY	470 $\Omega$	"	"
R125	QRD141J-101SY	100 $\Omega$	"	"
R126	QRD141J-331SY	330 $\Omega$	"	"
R131	QRD141J-391SY	390 $\Omega$	"	"
R132	QRD141J-271SY	270 $\Omega$	"	"
R133	QRD141J-123SY	12 k $\Omega$	"	"
R134	QRD141J-332SY	3.3 k $\Omega$	"	" 
R135	QRD149J-470S	47 $\Omega$	"	"
R136	QRD141J-472SY	4.7 k $\Omega$	"	"
R137	QRD141J-823SY	82 k $\Omega$	"	"
R138	QVP4A0B-223	22 k $\Omega$	"	Variable
R139	QRD141J-473SY	47 k $\Omega$	1/4 W	Carbon
R140	QRD141J-123SY	12 k $\Omega$	"	"
R141	QRD141J-103SY	10 k $\Omega$	"	"
R161	QRD141J-363SY	36 k $\Omega$	"	"
R162	QRD141J-393S	39 k $\Omega$	"	"
R163	QRD141J-683SY	68 k $\Omega$	"	"
R164	QRD141J-163SY	16 k $\Omega$	"	"
R165	QVP4A0B-472	4.7 k $\Omega$	"	Variable
R166	QRD141J-102SY	1 k $\Omega$	1/4 W	Carbon
R167	QRD149J-330S	33 $\Omega$	"	" 
R168	QVP4A0B-474	470 k $\Omega$	"	Variable
R169	QRD141J-223SY	22 k $\Omega$	1/4 W	Carbon
R170	QRD141J-223SY	"	"	"
R171	QRD141J-513SY	51 k $\Omega$	"	"
R172	QRD141J-513SY	"	"	"
R173	QRD141J-103SY	10 k $\Omega$	"	"
R174	QRD141J-103SY	"	"	"
R175	QRD141J-332SY	3.3 k $\Omega$	"	"
R176	QRD141J-332SY	"	"	"
R177	QRD141J-102SY	1 k $\Omega$	"	"

 : Safety Parts

### Resistors

Item No.	Part Number	Rating		Description
R178	QRD141J-222SY	2.2 k $\Omega$	1/4 W	Carbon
R179	QRD141J-104SY	100 k $\Omega$	"	"
R191	QRD141J-332SY	3.3 k $\Omega$	"	"
R192	QRD141J-332SY	"	"	"
R193	QRD141J-104SY	100 k $\Omega$	"	"
R194	QRD141J-393SY	39 k $\Omega$	"	"
R195	QRD141J-103SY	10 k $\Omega$	"	"
R196	QRD141J-223SY	22 k $\Omega$	"	"
R197	QRD141J-223SY	"	"	"
R198	QRD141J-223SY	"	"	"
R201	QRD141J-152SY	1.5 k $\Omega$	"	"
R202	QRD141J-103SY	10 k $\Omega$	"	"
R203	QRD141J-103SY	"	"	"
R204	QRD141J-331SY	330 $\Omega$	"	"
R205	QRD141J-562SY	5.6 k $\Omega$	"	"
R206	QRD141J-222SY	2.2 k $\Omega$	"	"
R207	QRD141J-104SY	100 k $\Omega$	"	"
R208	QRD141J-151SY	150 $\Omega$	"	"
R209	QRD141J-151SY	"	"	"
R210	QRD141J-221SY	220 $\Omega$	"	"
R211	QRD141J-561SY	560 $\Omega$	"	"
R212	QRD141J-151SY	150 $\Omega$	"	"
R271	QRD141J-104SY	100 k $\Omega$	"	"
R272	QRD141J-222SY	2.2 k $\Omega$	"	"
R273	QRD141J-331SY	330 $\Omega$	"	"
R274	QRD141J-182SY	1.8 k $\Omega$	"	"
R275	QRD141J-153SY	15 k $\Omega$	"	"
R301	QRD141J-683SY	68 k $\Omega$	"	"
R302	QRD141J-563SY	56 k $\Omega$	"	"
R303	QRD141J-154SY	150 k $\Omega$	"	"
R304	QRD141J-103SY	10 k $\Omega$	"	"
R305	QRD141J-333SY	33 k $\Omega$	"	"
R306	QRD141J-102SY	1 k $\Omega$	"	"
R307	QRD141J-303SY	30 k $\Omega$	"	"
R310	QRD141J-102SY	1 k $\Omega$	"	"
R311	QRD141J-102SY	"	"	"
R312	QRD141J-102SY	"	"	"
R313	QRD141J-102SY	"	"	"
R314	QRD141J-102SY	"	"	"
R315	QRD141J-102SY	"	"	"
R316	QRD141J-102SY	"	"	"
R317	QRD141J-681SY	680 $\Omega$	"	"
R318	QRD141J-682SY	6.8 k $\Omega$	"	"
R319	QRD141J-751SY	750 $\Omega$	"	"
R320	QRD141J-222SY	2.2 k $\Omega$	"	"
R351	QRD141J-393SY	39 k $\Omega$	"	"
R352	QRD141J-822SY	8.2 k $\Omega$	"	"
R353	QRD141J-152SY	1.5 k $\Omega$	"	"
R354	QRD141J-821SY	820 $\Omega$	"	"
R355	QRD141J-393SY	39 k $\Omega$	"	"
R356	QRD141J-682SY	6.8 k $\Omega$	"	"
R357	QRD141J-182SY	1.8 k $\Omega$	"	"
R358	QRD141J-821SY	820 $\Omega$	"	"
R359	QRD141J-223SY	22 k $\Omega$	"	"
R403	QRD141J-563SY	56 k $\Omega$	"	"
R404	QRD141J-563SY	"	"	"
R405	QRD141J-222SY	2.2 k $\Omega$	"	"
R406	QRD141J-222SY	"	"	"
R407	QRD141J-224SY	220 k $\Omega$	"	"
R408	QRD141J-224SY	"	"	"
R409	QRD141J-301SY	300 $\Omega$	"	"
R410	QRD141J-301SY	"	"	"
R411	QRD141J-473SY	47 k $\Omega$	"	"
R412	QRD141J-473SY	"	"	"
R413	QRD141J-224SY	220 k $\Omega$	"	"
R414	QRD141J-224SY	"	"	"
R415	QRD141J-153SY	15 k $\Omega$	"	"
R416	QRD141J-153SY	"	"	"
R417	QRD141J-682SY	6.8 k $\Omega$	"	"
R418	QRD141J-682SY	"	"	"



## Resistors

Item No.	Part Number	Rating	Description
R419	QRD141J-102SY	1 kΩ	1/4 W Carbon
R420	QRD141J-102SY	"	"
R421	QRD149J-560S	56 Ω	"
R422	QRD149J-560S	"	"
R423	QRD141J-564SY	560 kΩ	"
R424	QRD141J-564SY	"	"
R461	QRD141J-334SY	330 kΩ	"
R462	QRD141J-334SY	"	"
R463	QRD141J-104SY	100 kΩ	"
R464	QRD141J-104SY	"	"

△ : Safety Parts

## Others

Item No.	Part Number	Rating	Description
P104	QMV5005-002		2 Pins Plug
S401	QSP0259-107		Select Switch
PHAUX	E03591-41F		Pin Jack
	EWR25J-06DD		Flat Cable
	E03572-019P		Antenna Terminal
	E300098-001		Shield Case
	E43727-001		Tab
	E67125-001		LED Holder (Signal)
	E67126-001		LED Holder (Tuned)
	E67127-001		LED Holder (Stereo)
	QAA2232-002		Tuning Capacitor
	QMV5005-002		2 Pins Plug
	QMV5005-004		4 Pins Plug
	QMV5005-006		6 Pins Plug

## 8-(2) TXX-255 Main Amp., Power Supply and Other Functions Split P.C. Board Ass'y

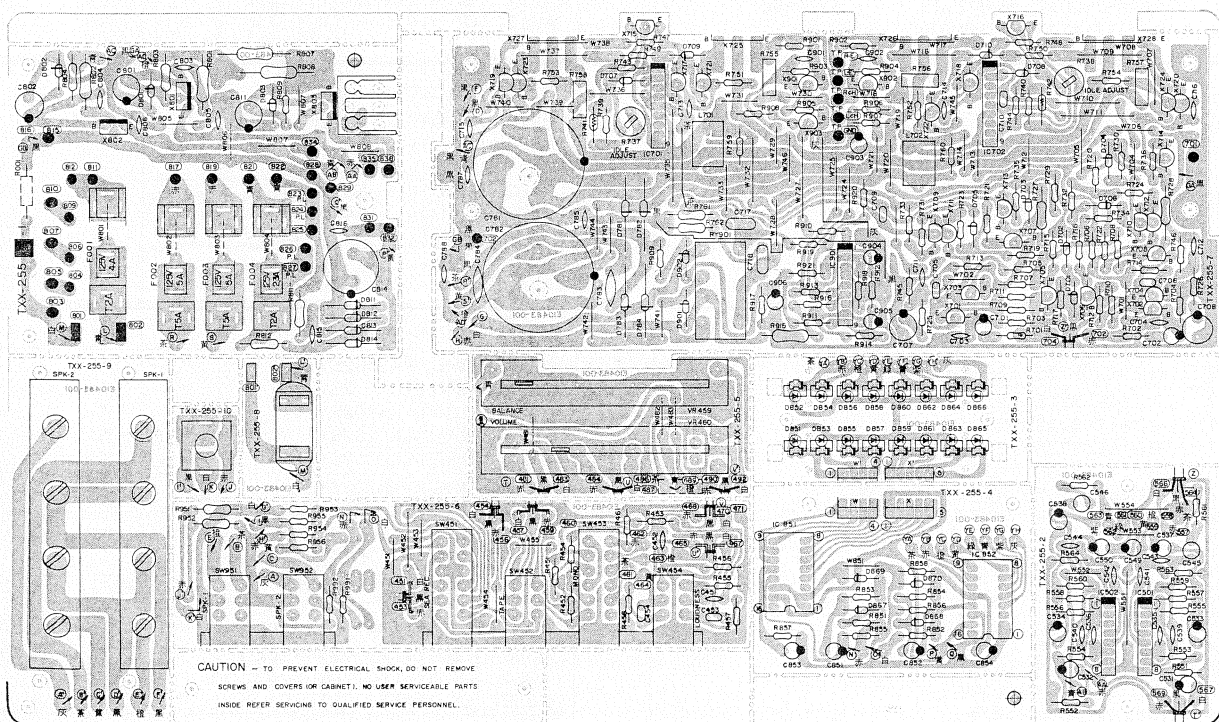


Fig. 16

### Each Individual P.C. Board Location

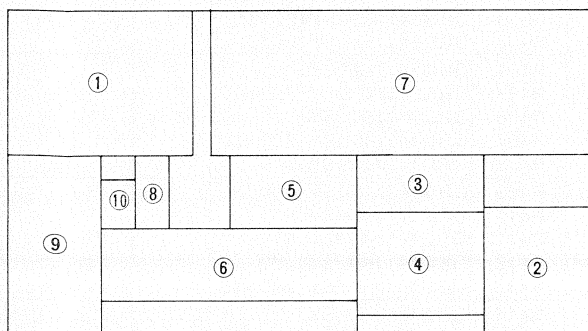


Fig. 17

- ① TXX-255-1 : Power Supply P.C. Board Ass'y
- ② TXX-255-2 : S.E.A. (Sound Effect Amplifier) P.C. Board Ass'y
- ③ TXX-255-3 : L.E.D. P.C. Board Ass'y
- ④ TXX-255-4 : Power Indicator Driver P.C. Board Ass'y
- ⑤ TXX-255-5 : Volume Control P.C. Board Ass'y
- ⑥ TXX-255-6 : Mode and Speaker Select Switch P.C. Board Ass'y
- ⑦ TXX-255-7 : Main Amp. P.C. Board Ass'y
- ⑧ TXX-255-8 : AC Socket P.C. Board Ass'y
- ⑨ TXX-255-9 : Speaker Terminals P.C. Board Ass'y
- ⑩ TXX-255-10 : Headphones Jack P.C. Board Ass'y

#### Note:

In   should be indicated an area code according to the table shown below when placing an order.

Designated Areas	P.C. Board Ass'y
U. K.	TXX-255 <span style="border: 1px solid black; padding: 0 2px;">EBS</span>
Europe	TXX-255 <span style="border: 1px solid black; padding: 0 2px;">E</span>

#### Note:

The specific symbols (赤, 黒, 白, . . . . etc.) on a surface of P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly at the factory.



### Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT		Maker
X701	2SC1775AV(F1)	0.2 W	200 MHz	Silicon	Hitachi
X702	2SC1775AV(F1)	"	"	"	"
X703	2SC1775AV(F1)	"	"	"	"
X704	2SC1775AV(F1)	"	"	"	"
X705	2SC2546(E)	0.4 W	90 MHz	"	"
X706	2SC2546(E)	"	"	"	"
X707	2SA949(O,Y)	3 W	120 MHz	"	Toshiba
X708	2SA949(O,Y)	"	"	"	"
X709	2SA949(O,Y)	"	"	"	"
X710	2SA949(O,Y)	"	"	"	"
X711	2SA1029(C)	0.2 W	200 MHz	"	Hitachi
X712	2SA1029(C)	"	"	"	"
X713	2SC2229(O,Y)	0.8 W	120 MHz	"	Toshiba
X714	2SC2229(O,Y)	"	"	"	"
X715	2SC2546(E)	0.4 W	90 MHz	"	Hitachi
X716	2SC2546(E)	"	"	"	"
X717	2SC1775AV(F)	0.2 W	200 MHz	"	"
X718	2SC1775AV(F)	"	"	"	"
X719	2SA872AV(E)	0.3 W	120 MHz	"	"
X720	2SA872AV(E)	"	"	"	"
X721	2SC2235(O,Y)	0.9 W	"	"	Toshiba
X722	2SC2235(O,Y)	"	"	"	"
X723	2SA965(O,Y)	"	"	"	"
X724	2SA965(O,Y)	"	"	"	"
X725	2SD845LB(R,O)	120 W	20 MHz	"	"
X726	2SD845LB(R,O)	"	"	"	"
X727	2SB755LB(R,O)	"	"	"	"
X728	2SB755LB(R,O)	"	"	"	"
X801	2SD313V(D,E)	30 W	8 MHz	"	Sanyo
X802	2SB507V(D,E)	"	"	"	"
X803	2SD313V(D,E)	"	"	"	"
X901	2SC1775AV(F)	0.2 W	200 MHz	"	Hitachi
X902	2SC1775AV(F)	"	"	"	"
X903	2SA872AV(E)	0.3 W	120 MHz	"	"

### Integrated Circuits

Item No.	Part Number	Rating		Description	
		Pc			Maker
IC501	HA1457	0.5 W		I.C.	Hitachi
IC502	HA1457	"		"	"
IC701	VC5022	"		"	Toyo Dengu
IC702	VC5022	"		"	"
IC851	BA684	"		"	"
IC852	BA684	"		"	"
IC901	TA7317P	0.5 W		"	Toshiba

### Diodes

Item No.	Part Number	Rating	Description	
				Maker
D701	1S2076-31		Silicon	Hitachi
D702	1S2076-31		"	"
D703	1S2076-31		"	"
D704	1S2076-31		"	"
D705	1S2076-31		"	"
D706	1S2076-31		"	"
D707	1S2076-31		"	"
D708	1S2076-31		"	"
D709	1S2076-31		"	"
D710	1S2076-31		"	"
D781	30D2FA-S		"	Nihon Inter
D782	30D2FA-S		"	"
D783	30D2FA-S		"	"
D784	30D2FA-S		"	"
D801	RD22EB3		Silicon (Zener)	NEC
D802	RD22EB3		"	"
D803	RD13EB3		"	"

### Diodes

Item No.	Part Number	Rating	Description	
				Maker
D811	ERB12-02RKL1		Silicon	Fuji
D812	ERB12-02RKL1		"	"
D813	ERB12-02RKL1		"	"
D814	ERB12-02RKL1		"	"
D851	SLB-26GG		LED	Toyo Dengu
D852	SLB-26GG		"	"
D853	SLB-26GG		"	"
D854	SLB-26GG		"	"
D855	SLB-26GG		"	"
D856	SLB-26GG		"	"
D857	SLB-26GG		"	"
D858	SLB-26GG		"	"
D859	SLB-26GG		"	"
D860	SLB-26GG		"	"
D861	SLB-26GG		"	"
D862	SLB-26GG		"	"
D863	SLB-26GG		"	"
D864	SLB-26GG		"	"
D865	SLB-26GG		"	"
D866	SLB-26GG		"	"
D867	1S2076-31		Silicon	Hitachi
D868	1S2076-31		"	"
D869	1S2076-31		"	"
D870	1S2076-31		"	"
D901	1S2076-31		"	"
D902	1S2076-31		"	"

### Coils

Item No.	Part Number	Rating	Description
L701	E04059-1R0	1.0 $\mu$ H	Choke Coil
L702	E04059-1R0	"	"

### Capacitors

Item No.	Part Number	Rating		Description
C451	QCS31HJ-151Z	160 pF	50 V	Ceramic
C452	QCS31HJ-151Z	"	"	"
C453	QFM31HK-183Z	0.018 $\mu$ F	"	Mylar
C454	QFM31HK-183Z	"	"	"
C531	QEB51EM-475	4.7 $\mu$ F	25 V	Low Leak Current Electrolytic
C532	QEB51EM-475	"	"	"
C533	QET51AR-476	47 $\mu$ F	10 V	Electrolytic
C534	QET51AR-476	"	"	"
C535	QCS31HJ-101Z	100 pF	50 V	Ceramic
C536	QCS31HJ-101Z	"	"	"
C537	QET51AR-476	47 $\mu$ F	10 V	Electrolytic
C538	QET51AR-476	"	"	"
C539	QCS31HJ-820Z	82 pF	50 V	Ceramic
C540	QCS31HJ-820Z	"	"	"
C541	QCS31HJ-560Z	56 pF	"	"
C542	QCS31HJ-560Z	"	"	"
C543	QCS31HJ-271Z	270 pF	"	"
C544	QCS31HJ-271Z	"	"	"
C545	QEZ0046-475	4.7 $\mu$ F	"	Electrolytic
C546	QEZ0046-475	"	"	"
C549	QET51ER-476	47 $\mu$ F	25 V	"
C550	QET51ER-476	"	"	"
C701	QET61HR-475Z	4.7 $\mu$ F	50 V	"
C702	QET61HR-475Z	"	"	"
C705	QFM31HK-392Z	3900 pF	"	Mylar
C706	QFM31HK-392Z	"	"	"
C707	QET61CR-107Z	100 $\mu$ F	16 V	Electrolytic
C708	QET61CR-107Z	"	"	"
C709	QFM31HK-272Z	2700 pF	50 V	Mylar
C710	QFM31HK-272Z	"	"	"

△ : Safety Parts

## Capacitors

Item No.	Part Number	Rating		Description
C711	QCS31HJ-120Z	12 pF	50 V	Ceramic
C712	QCS31HJ-120Z	"	"	"
C713	QCS31HJ-470Z	47 pF	"	"
C714	QCS31HJ-470Z	"	"	"
C715	QCS31HJ-470Z	"	"	"
C716	QCS31HJ-470Z	"	"	"
C717	QFM31HK-473Z	0.047 $\mu$ F	"	Mylar
C718	QFM31HK-473Z	"	"	"
C781	QE Z0060-878E	8700 $\mu$ F	56 V	Electrolytic
C782	QE Z0060-878E	"	"	"
C783	QCE22HP-103	0.01 $\mu$ F	500 V	Ceramic
C784	QCE22HP-103	"	"	"
C785	QCF21HP-103	"	50 V	"
C787	QCF21HP-473A	0.047 $\mu$ F	"	"
C788	QCF21HP-473A	"	"	"
C801	QET51ER-107	100 $\mu$ F	25 V	Electrolytic
C802	QET51ER-107	"	"	"
C811	QET51CR-227	220 $\mu$ F	16 V	"
C814	QET51CR-228H	2200 $\mu$ F	"	"
C815	QCF21HP-223	0.022 $\mu$ F	50 V	Ceramic
C851	QET51ER-106	10 $\mu$ F	25 V	Electrolytic
C852	QET51ER-106	"	"	"
C853	QET51HR-225	2.2 $\mu$ F	50 V	"
C854	QET51HR-225	"	"	"
C901	QCF31HP-223Z	0.022 $\mu$ F	"	Ceramic
C902	QCF31HP-223Z	"	"	"
C903	QET51HR-226	22 $\mu$ F	"	Electrolytic
C904	QET61AR-107Z	100 $\mu$ F	10 V	"
C905	QET61CR-226Z	22 $\mu$ F	16 V	"
C906	QET61HR-105Z	1 $\mu$ F	50 V	"

## Resistors

Item No.	Part Number	Rating		Description
R001	QRC121K-275EM	2.7 M $\Omega$	1/2 W	Composition $\Delta$
R451	QRD141J-332SY	3.3 k $\Omega$	1/4 W	Carbon
R452	QRD141J-332SY	"	"	"
R453	QRD141J-332SY	"	"	"
R454	QRD141J-332SY	"	"	"
R455	QRD141J-564SY	560 k $\Omega$	"	"
R456	QRD141J-564SY	"	"	"
R457	QRD141J-223SY	22 k $\Omega$	"	"
R458	QRD141J-223SY	"	"	"
R459	QVZ5010-009	250 k $\Omega$		Variable (BALANCE)
R460	QVZ5010-008	"		(VOLUME)
R461	QRD141J-333SY	33 k $\Omega$	1/4 W	Carbon
R551	QRD141J-184SY	180 k $\Omega$	"	"
R552	QRD141J-184SY	"	"	"
R553	QRD141J-102SY	1 k $\Omega$	"	"
R554	QRD141J-102SY	"	"	"
R555	QRD141J-222SY	2.2 k $\Omega$	"	"
R556	QRD141J-222SY	"	"	"
R557	QRD141J-682SY	6.8 k $\Omega$	"	"
R558	QRD141J-682SY	"	"	"
R559	QRD141J-103SY	10 k $\Omega$	"	"
R560	QRD141J-103SY	"	"	"
R561	QRD141J-562SY	5.6 k $\Omega$	"	"
R562	QRD141J-562SY	"	"	"
R563	QRD141J-102SY	1 k $\Omega$	"	"
R564	QRD141J-102SY	"	"	"
R701	QRD141J-222SY	2.2 k $\Omega$	"	"
R702	QRD141J-222SY	"	"	"
R703	QRD141J-473SY	47 k $\Omega$	"	"
R704	QRD141J-473SY	"	"	"
R705	QRD149J-102S	1 k $\Omega$	"	" $\Delta$
R706	QRD149J-102S	"	"	" $\Delta$
R707	QRD149J-102S	"	"	" $\Delta$
R708	QRD149J-102S	"	"	" $\Delta$
R709	QRD149J-220S	22 $\Omega$	"	" $\Delta$

## Resistors

Item No.	Part Number	Rating		Description
R710	QRD149J-220S	22 $\Omega$	1/4 W	Carbon $\Delta$
R711	QRD149J-220S	"	"	" $\Delta$
R712	QRD149J-220S	"	"	" $\Delta$
R713	QRD149J-150S	15 $\Omega$	"	" $\Delta$
R714	QRD149J-150S	"	"	" $\Delta$
R715	QRD149J-301S	300 $\Omega$	"	" $\Delta$
R716	QRD149J-301S	"	"	" $\Delta$
R717	QRD141J-223SY	22 k $\Omega$	"	"
R719	QRD149J-220S	22 $\Omega$	"	" $\Delta$
R720	QRD149J-220S	"	"	" $\Delta$
R721	QRD149J-100S	10 $\Omega$	"	" $\Delta$
R722	QRD149J-100S	"	"	" $\Delta$
R723	QRD149J-100S	"	"	" $\Delta$
R724	QRD149J-100S	"	"	" $\Delta$
R725	QRD141J-132SY	1.3 k $\Omega$	"	"
R726	QRD141J-132SY	"	"	"
R727	QRG017J-822S	8.2 k $\Omega$	1 W	Oxide Metal Film
R728	QRG017J-822S	"	"	"
R729	QRD149J-181S	180 $\Omega$	1/4 W	Carbon $\Delta$
R730	QRD149J-181S	"	"	" $\Delta$
R731	QRD149J-561S	560 $\Omega$	"	" $\Delta$
R732	QRD149J-561S	"	"	" $\Delta$
R733	QRD141J-473SY	47 k $\Omega$	"	"
R734	QRD141J-473SY	"	"	"
R735	QRD149J-181S	180 $\Omega$	"	" $\Delta$
R736	QRD149J-181S	"	"	" $\Delta$
R737	QVZ3501-471	470 $\Omega$	1/2 W	Variable
R738	QVZ3501-471	"	"	"
R739	QRD141J-471SY	"	1/4 W	Carbon
R740	QRD141J-471SY	"	"	"
R741	SDT35	350 $\Omega$	1 W	Thermistor
R742	SDT35	"	"	"
R743	QRD141J-391SY	390 $\Omega$	1/4 W	Carbon
R744	QRD141J-391SY	"	"	"
R745	QRD141J-243SY	24 k $\Omega$	"	"
R746	QRD141J-243SY	"	"	"
R747	QRD149J-122S	1.2 k $\Omega$	"	" $\Delta$
R748	QRD149J-122S	"	"	" $\Delta$
R749	QRD149J-101S	100 $\Omega$	"	" $\Delta$
R750	QRD149J-101S	"	"	" $\Delta$
R751	QRD149J-100S	10 $\Omega$	"	" $\Delta$
R752	QRD149J-100S	"	"	" $\Delta$
R753	QRD149J-100S	"	"	" $\Delta$
R754	QRD149J-100S	"	"	" $\Delta$
R755	QRM024K-R22	0.22 $\Omega$	2 W	Metal Plate $\Delta$
R756	QRM024K-R22	"	"	" $\Delta$
R757	QRM024K-R22	"	"	" $\Delta$
R758	QRM024K-R22	"	"	" $\Delta$
R759	QRD149J-4R7S	4.7 $\Omega$	1/4 W	Carbon $\Delta$
R760	QRD149J-4R7S	"	"	" $\Delta$
R761	QRZ0050-100	10 $\Omega$	1/2 W	" $\Delta$
R762	QRZ0050-100	"	"	" $\Delta$
R801	QRG017J-680S	68 $\Omega$	1 W	Oxide Metal Film $\Delta$
R802	QRG017J-680S	"	"	" $\Delta$
R803	QRD129J-392	3.9 k $\Omega$	1/2 W	Carbon $\Delta$
R804	QRD129J-392	"	"	" $\Delta$
R807	QRG027J-121	120 $\Omega$	2 W	Oxide Metal Film $\Delta$
R808	QRG027J-121	"	"	" $\Delta$
R809	QRD141J-332SY	3.3 k $\Omega$	1/4 W	Carbon $\Delta$
R811	QRD129J-2R7	2.7 $\Omega$	1/2 W	" $\Delta$
R812	QRD129J-2R7	"	"	" $\Delta$
R851	QRD141J-272SY	2.7 k $\Omega$	1/4 W	"
R852	QRD141J-272SY	"	"	"
R853	QRD141J-390SY	39 $\Omega$	"	"
R854	QRD141J-390SY	"	"	"
R855	QRD141J-103SY	10 k $\Omega$	"	"
R856	QRD141J-103SY	"	"	"
R857	QRD141J-473SY	47 k $\Omega$	"	"
R858	QRD141J-473SY	"	"	"
R901	QRD141J-222SY	2.2 k $\Omega$	"	"

$\Delta$  : Safety Parts

## Resistors

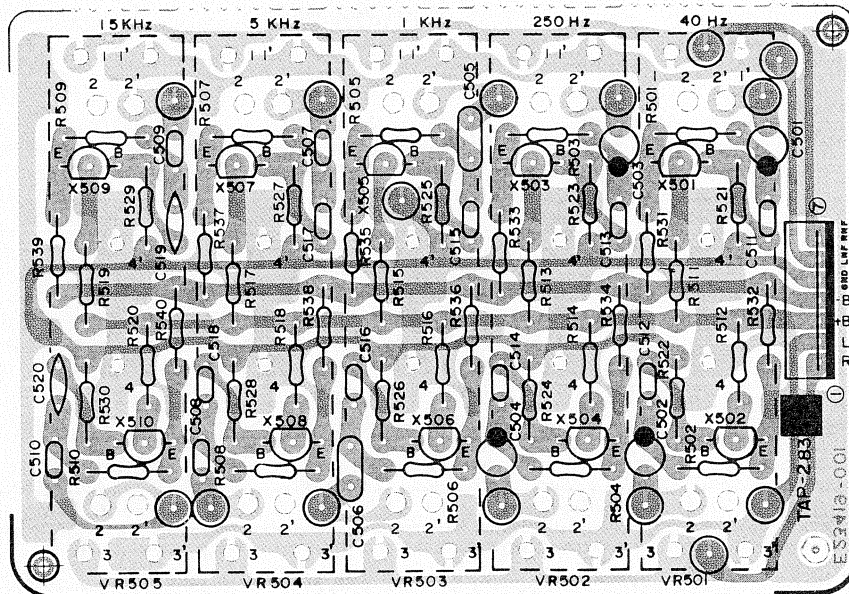
Item No.	Part Number	Rating		Description
R902	QRD141J-222SY	2.2 k $\Omega$	1/4 W	Carbon
R903	QRD141J-102SY	1 k $\Omega$	"	"
R904	QRD141J-102SY	"	"	"
R905	QRD141J-123SY	12 k $\Omega$	"	"
R906	QRD141J-123SY	"	"	"
R907	QRD141J-103SY	10 k $\Omega$	"	"
R908	QRD141J-332SY	3.3 k $\Omega$	"	"
R909	QRD141J-683SY	68 k $\Omega$	"	"
R910	QRD141J-563SY	56 k $\Omega$	"	"
R911	QRD141J-183SY	18 k $\Omega$	"	"
R912	QRD141J-683SY	68 k $\Omega$	"	"
R913	QRD141J-153SY	15 k $\Omega$	"	"
R914	QRD141J-184SY	180 k $\Omega$	"	"
R915	QRG017J-471S	470 $\Omega$	1 W	Oxide Metal Film $\Delta$
R916	QRD141J-151SY	150 $\Omega$	1/4 W	Carbon
R917	QRD141J-223SY	22 k $\Omega$	"	"
R918	QRD141J-104SY	100 k $\Omega$	"	"
R919	QRD141J-104SY	"	"	"
R920	QRD141J-104SY	"	"	"
R921	QRD141J-563SY	56 k $\Omega$	"	"
R951	QRD129J-221	220 $\Omega$	1/2 W	" $\Delta$
R952	QRD129J-221	"	"	" $\Delta$
R953	QRD141J-332SY	3.3 k $\Omega$	1/4 W	"
R954	QRD141J-332SY	"	"	"
R955	QRD141J-681SY	680 $\Omega$	"	"
R956	QRD141J-681SY	"	"	"

## Others

Item No.	Part Number	Rating	Description
RY901	EWS014-027		Socket Wire
	E300821-001		LED Holder
	EWS012-032		Socket Wire Ass'y
	EWS016-019		"
	ESK6D24-213		Relay Switch
	EWS017-017		Socket Wire Ass'y
	EWS012-033		"
	EWR24J-10DD		Flat Cable
	EWR25J-10DD		"
	E03572-007EM		Speaker Terminal
SPK	E300160-004		Heat-sink
	E48965-002		Fuse Clip
	E61537-002		Heat-sink
	QSP0229-019		Push Switch
			(Speaker select)

$\Delta$  : Safety Parts

## 8-(3) TAP-283 S.E.A. (Sound Effect Amplifier) Controls P.C. Board Ass'y



## Capacitors

Item No.	Part Number	Rating		Description
C501	QET61HR-475Z	4.7 $\mu$ F	50 V	Electrolytic
C502	QET61HR-475Z	"	"	"
C503	QET61HR-474Z	0.47 $\mu$ F	"	"
C504	QET61HR-474Z	"	"	"
C505	QFM31HK-124Z	0.12 $\mu$ F	"	Mylar
C506	QFM31HK-124Z	"	"	"
C507	QFM31HK-273Z	0.027 $\mu$ F	"	"
C508	QFM31HK-273Z	"	"	"
C509	QFM31HK-562Z	5600 pF	"	"
C510	QFM31HK-562Z	"	"	"
C511	QFM31HK-223Z	0.022 $\mu$ F	"	"
C512	QFM31HK-223Z	"	"	"
C513	QFM31HK-822Z	8200 pF	"	"
C514	QFM31HK-822Z	"	"	"
C515	QFM31HK-332Z	3300 pF	"	"
C516	QFM31HK-332Z	"	"	"
C517	QFM31HK-102Z	1000 pF	"	"
C518	QFM31HK-102Z	"	"	"
C519	QCS21HJ-681	680 pF	"	Ceramic
C520	QCS21HJ-681	"	"	"

## Resistors

Item No.	Part Number	Rating		Description
R501	QRD141J-122SY	1.2 k $\Omega$	1/4 W	Carbon
R502	QRD141J-122SY	"	"	"
R503	QRD141J-122SY	"	"	"
R504	QRD141J-122SY	"	"	"
R505	QRD141J-122SY	"	"	"
R506	QRD141J-122SY	"	"	"
R507	QRD141J-122SY	"	"	"
R508	QRD141J-122SY	"	"	"
R509	QRD141J-122SY	"	"	"
R510	QRD141J-122SY	"	"	"
R511	QRD141J-391SY	390 $\Omega$	"	"
R512	QRD141J-391SY	"	"	"
R513	QRD141J-391SY	"	"	"
R514	QRD141J-391SY	"	"	"
R515	QRD141J-391SY	"	"	"

## Resistors

Item No.	Part Number	Rating		Description
R516	QRD141J-391SY	390 $\Omega$	1/4 W	Carbon
R517	QRD141J-391SY	"	"	"
R518	QRD141J-391SY	"	"	"
R519	QRD141J-391SY	"	"	"
R520	QRD141J-391SY	"	"	"
R521	QRD141J-134SY	130 k $\Omega$	"	"
R522	QRD141J-134SY	"	"	"
R523	QRD141J-913SY	91 k $\Omega$	"	"
R524	QRD141J-913SY	"	"	"
R525	QRD141J-513SY	51 k $\Omega$	"	"
R526	QRD141J-513SY	"	"	"
R527	QRD141J-333SY	33 k $\Omega$	"	"
R528	QRD141J-333SY	"	"	"
R529	QRD141J-243SY	24 k $\Omega$	"	"
R530	QRD141J-243SY	"	"	"
R531	QRD141J-682SY	6.8 k $\Omega$	"	"
R532	QRD141J-682SY	"	"	"
R533	QRD141J-682SY	"	"	"
R534	QRD141J-682SY	"	"	"
R535	QRD141J-682SY	"	"	"
R536	QRD141J-682SY	"	"	"
R537	QRD141J-682SY	"	"	"
R538	QRD141J-682SY	"	"	"
R539	QRD141J-682SY	"	"	"
R540	QRD141J-682SY	"	"	"

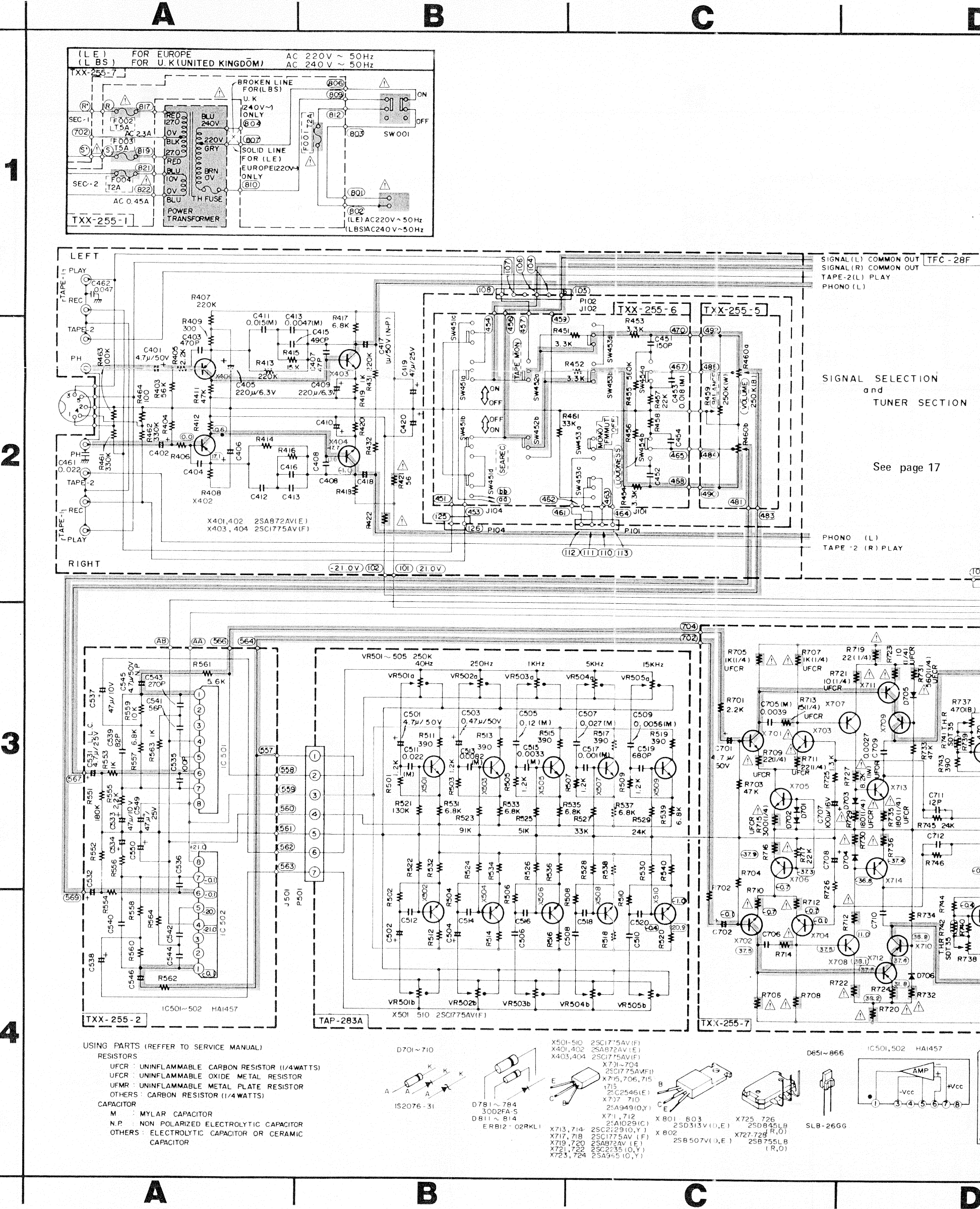
## Others

Item No.	Part Number	Rating	Description
VR501	QVZ5010-002		Variable (40 Hz)
VR502	QVZ5010-002		" (250 Hz)
VR503	QVZ5010-002		" (1 kHz)
VR504	QVZ5010-002		" (5 kHz)
VR505	QVZ5010-002		" (15 kHz)
	QMV5005-007		Pin Plug Ass'y

# 9. Accessories List

Item No.	Part Number	Description	Q'ty
1	E30580-820A	Instruction Book	1
2	BT20013C	Warranty Card (for U. K. only)	1
3	E03614-004	FM Antenna	1
4	E41202-2	Envelope for Instruction Book	1

10. R-S33L Schematic Diagram



Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TFC-28E	FM/AM Tuner and Equalizer Amp. P.C. Board Ass'y	8
TXX-255	Main Amp., Power Supply and Other Functions Split P.C. Board Ass'y	11



Notes:

1. shows DC voltage to the chassis with no signal input.
2. \* shows DC voltage to the chassis when 10 mV antenna input applied.
3. Voltage values in are positive.
4. Voltage values in are negative.
5. indicates positive B power supply.
6. indicates negative B power supply.
7. indicates signal path.

8. When replacing the those marked with to ensure safety.
9. Parts in red indicate The design and construction notice.
10. This is the standard The design and construction notice.



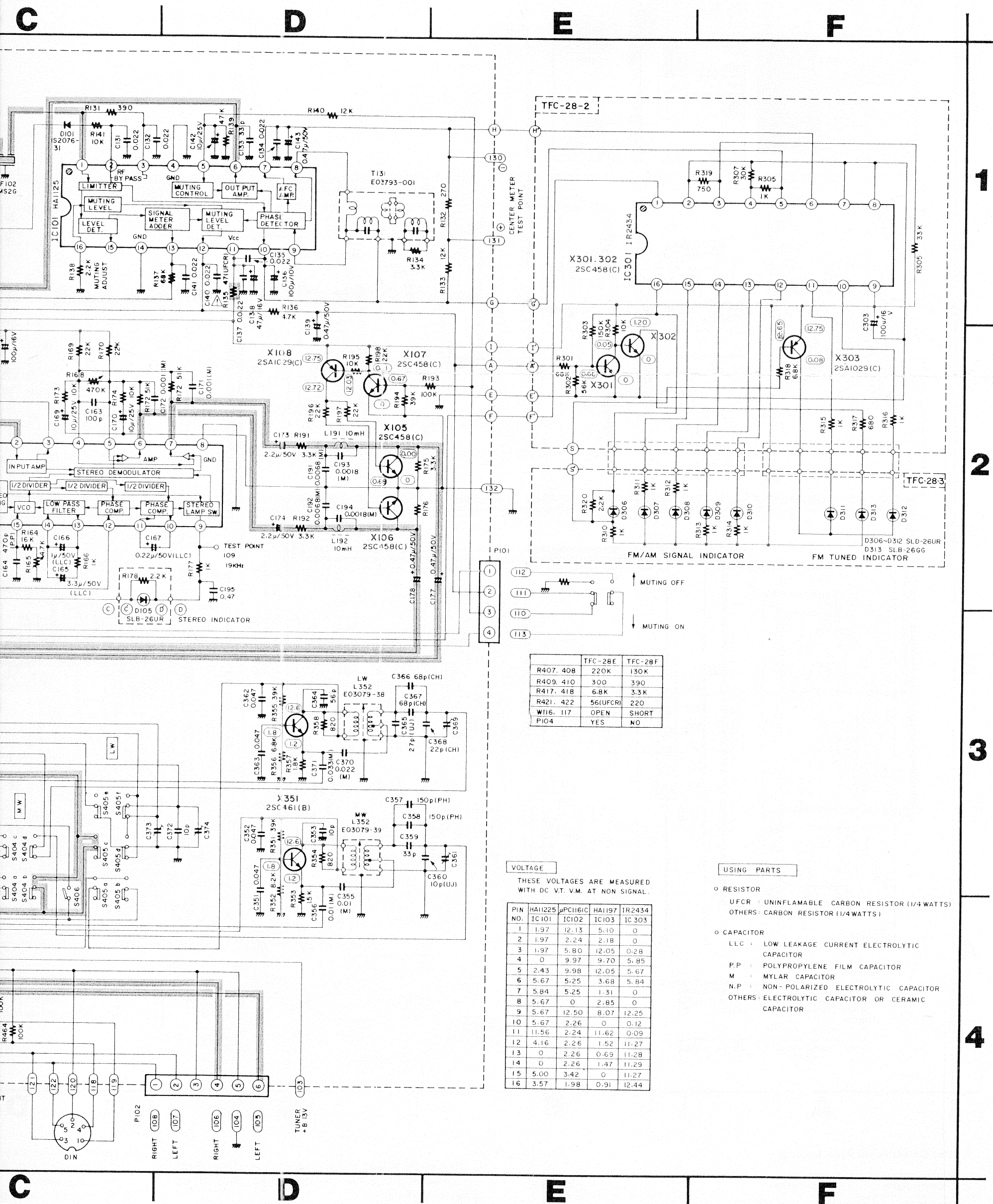


8. When replacing the parts in the darkened area (  ) and those marked with  , be sure to use the designated parts to ensure safety.
9. Parts in red indicate transistors or ICs.
10. This is the standard circuit diagram.  
The design and contents are subject to change without notice.

supply.  
supply.







	TFC-28E	TFC-28F
R407, 408	220K	130K
R409, 410	300	390
R417, 418	6.8K	3.3K
R421, 422	56(UFCR)	220
W116, 117	OPEN	SHORT
PI04	YES	NO

VOLTAGE				
THESE VOLTAGES ARE MEASURED WITH DC V.T. V.M. AT NON SIGNAL.				
PIN NO.	HAI1225 IC101	PC1161C IC102	HAI197 IC103	IR2434 IC303
1	1.97	12.13	5.10	0
2	1.97	2.24	2.18	0
3	1.97	5.80	12.05	0.28
4	0	9.97	9.70	5.85
5	2.43	9.98	12.05	5.67
6	5.67	5.25	3.68	5.84
7	5.84	5.25	1.31	0
8	5.67	0	2.85	0
9	5.67	12.50	8.07	12.25
10	5.67	2.26	0	0.12
11	11.56	2.24	11.62	0.09
12	4.16	2.26	1.52	11.27
13	0	2.26	0.63	11.28
14	0	2.26	1.47	11.29
15	5.00	3.42	0	11.27
16	3.57	1.98	0.91	12.44

- USING PARTS
- RESISTOR
    - UFCR : UNINFLAMABLE CARBON RESISTOR (1/4 WATTS)
    - OTHERS : CARBON RESISTOR (1/4 WATTS)
  - CAPACITOR
    - LLC : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR
    - P.P : POLYPROPYLENE FILM CAPACITOR
    - M : MYLAR CAPACITOR
    - N.P : NON-POLARIZED ELECTROLYTIC CAPACITOR
    - OTHERS : ELECTROLYTIC CAPACITOR OR CERAMIC CAPACITOR

- When replacing the parts in the darkened area ( ) and those marked with  $\Delta$ , be sure to use the designated parts to ensure safety.
- Parts in red indicate transistors or ICs.
- This is the standard circuit diagram.
- The design and contents are subject to change without notice.



# 11. Packing Materials and Part Numbers

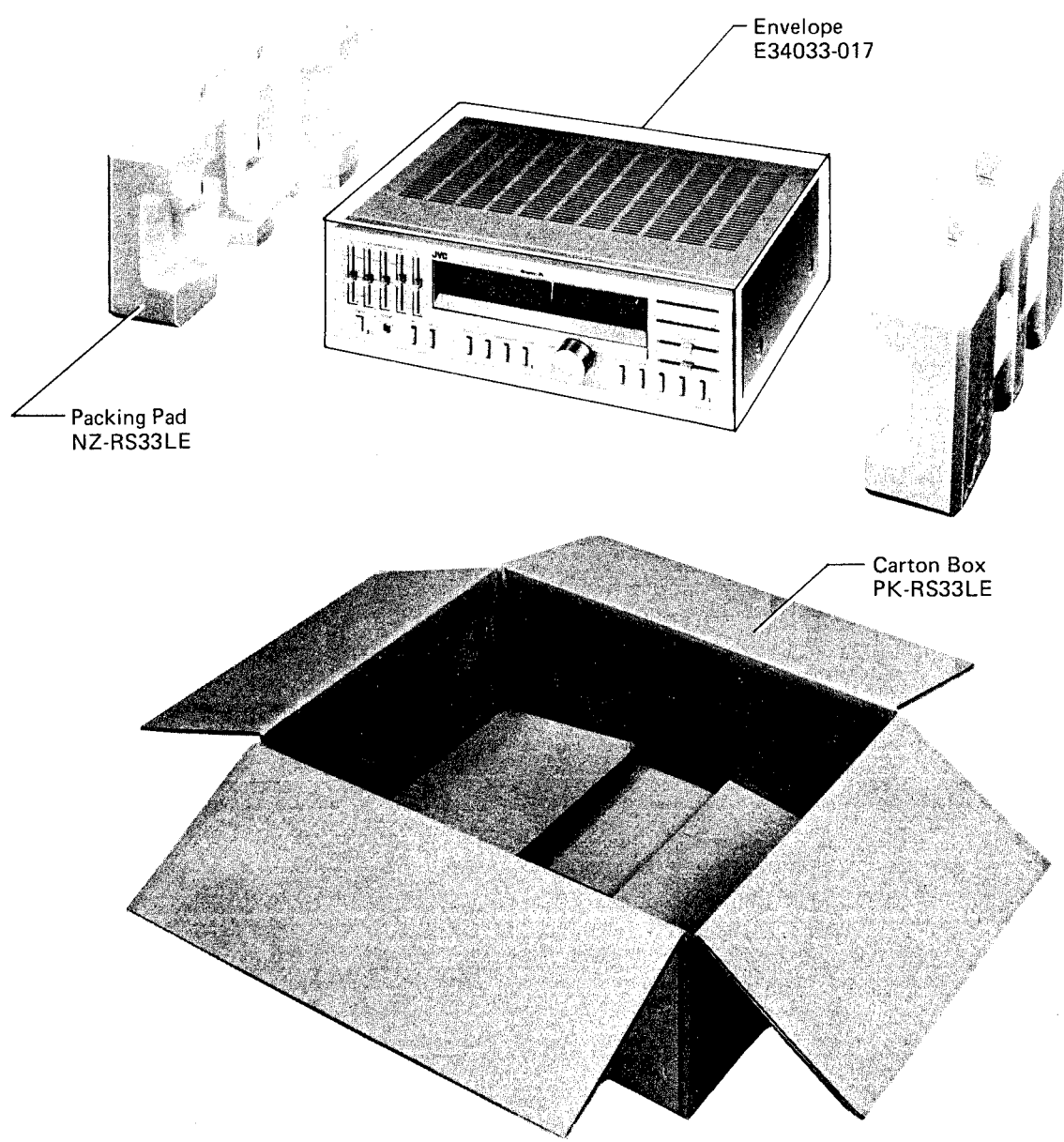


Fig. 19

Power Specifications

Areas	Line Voltage & Frequency	Power Consumption
Continental Europe U.K. and Australia	AC 220 V ~, 50 Hz AC 240 V ~, 50 Hz	390 W 390 W

# JVC

VICTOR COMPANY OF JAPAN, LIMITED, TOKYO, JAPAN